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DOME SHAFT FOR EARTH-COVERED LIQUEFIED PETROLEUM GAS TANK
[DOMSCHACHT FÜR ERDGEDECKTE FLÜSSIGGASBEHÄLTER]

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Description

The invention relates to a protective dome for protection and maintenance of accessibility of connection fittings to earth-covered liquefied petroleum gas tanks, consisting of a cylindrical dome shaft and a hood cover.

Such dome shafts are normally made from painted and/or hot-dip galvanized steel sheets and are mounted on the sleeve of underground liquefied petroleum gas tanks. They are characterized by a relatively high weight and must be mounted on the liquefied petroleum gas tank close to the installation work. This installation is very difficult for a single person, and incorrect assembly can result in an electrical connection between the dome shaft and the liquefied petroleum gas tank. With known steel dome shafts, there is a further risk that with inappropriate assembly, the surface coating of the tank will be damaged.

The object of the present invention is it to create a protective dome of the above-described type by which the connection fittings of an earth-covered liquefied petroleum gas tank can be protected from contamination, soil, and moisture, which features high strength, lower weight, and good corrosion resistance, and by which the surface

of the tank is not damaged during assembly.

This object is achieved in that the cylindrical dome shaft consists of a plastic. Here it can be provided that the hood cover covering the cylindrical dome shaft consists of a plastic or a metal. Through these measures, a dome shaft is created for an earth-covered fluid tank, preferably a liquefied petroleum gas tank, which is virtually corrosion-free and is light in weight, and can be installed simply and by a single person. The problem of electrical separation also becomes moot.

In order to prevent slipping of the dome shaft in the longitudinal and/or transverse direction, it can be held in predetermined position by means of mounting straps, which are securely affixed to the liquefied petroleum gas tank. Further, a snap connection can be provided, which can be aligned in an active connection with holes provided in the mounting straps. The snap connection can for example be securely affixed by a thermoplastic adhesive. For exceptionally high stresses, it is conceivable to produce the hood cover from stainless steel or hot-dip galvanized sheet.

By means of these measures a device is provided which is distinguished by simple processing and assembly and/or disassembly. The assembly is feasible with less energy expenditure. Thus working time and assembly costs can be saved. A dome shaft of the above described type is resistant to weathering and virtually maintenance-free, which keeps maintenance costs for a liquid gas plant down.

Further advantageous measures are described in the remaining subclaims. The invention is described with reference to the exemplary embodiment in the enclosed drawings and described in more detail below, wherein:

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Figure 1 is a side view of a liquefied petroleum gas tank to be placed under ground, with a lockable dome shaft covering the connection fittings;

Figure 2 is the front view of a liquefied petroleum gas tank to be installed under ground, with a mounted dome shaft.

The protective dome 10 shown in Figures 1 and 2 essentially consists of a preferably cylindrical dome shaft 11 with a hood cover 12. The hood cover 12 is hinge-connected by the hinge 13 to the hood 11. The dome shaft 10 is locked by means of mounting straps 14 and 14a via the connection fittings 15 of a liquefied petroleum gas tank 20 and surrounds these completely.

The liquefied petroleum gas tank 20 essentially consists of a cylindrical tank center part 19, which is preferably welded from steel sheet, and to which basket bases 18 and 18a are welded. The basket bases 18 and 18a preferably likewise consist of steel sheet. The liquefied petroleum gas tank 20 is gas-tight and pressure tight.

The cylindrical dome shaft 11 of the protective dome 10 can be closed with the foldable hinged hood cover 12. When the cylindrical dome

shaft 11 is opened, a withdrawal pipe 16 and a filler pipe 17 can be accessed by a connection fitting 15.

The connection fitting is 15 associated with the tank center part 19. The cylindrical dome shaft 11 is positively fitted to the tank center part 19 and held in place by means of snap connection devices, i.e. snap connections 22 and 22a and holes 21 and 21a in its position. The snap connection devices are mounted in the inside 23 of the cylindrical dome shaft 11. Here the mounting straps 14 and 14a are in active connection with the holes 21 and 21a by means of snap connections 22 and 22a and represent an additional lock.

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Reference Numerals

10	protective dome
11	cylindrical dome shaft
12	hood cover
13	hinge
14, 14a	mounting strap
15	connection fittings
16	withdrawal pipe
17	filler pipe
18, 18a	basket bases
19	tank center part
20	liquefied petroleum gas tanks
21, 21a	hole
22, 22a	snap connection
23	inner side

Claims

1. Protective dome for protection and maintenance of accessibility of connection fittings for earth-covered liquefied petroleum gas tanks, consisting of a cylindrical dome cover and a hood cover, characterized in that the cylindrical dome cover (11) consists of a plastic.
2. Protective dome in accordance with Claim 1, characterized in that the cylindrical dome cover (11) consists of a plastic laminate.
3. Protective dome in accordance with Claim 1, characterized in that the cylindrical dome shaft (11) consists of a polyethylene tube.
4. Protective dome in accordance with Claim 1, characterized in that the cylindrical dome cover (11) consists of an epoxy- and/or polyester laminate tube.
- 5 Protective dome in accordance with Claim 1, characterized in that the hood cover (12) consists of a plastic.
6. Protective dome in accordance with Claim 1, characterized in that the hood cover (12) consists of polyethylene.
7. Protective dome in accordance with Claim 1, characterized in that the hood cover (12) consists of an epoxy- and/or polyester laminate.

8. Protective dome in accordance with Claim 1, characterized in that the hood cover (12) consists of metal.

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9. Protective dome in accordance with Claim 8, characterized in that the hood cover (12) consists of hot-dip galvanized sheet.

10. Protective dome in accordance with Claim 8, characterized in that the hood cover (12) consists of stainless steel alloy.

11. Protective dome in accordance with Claims 1 to 10, characterized in that the hood cover (12) is connected to the ring-shaped hood (11) by a hinge (13).

12. Protective dome in accordance with the Claims 1 to 11, characterized in that the hood (11) is partly positively fitted to the liquefied petroleum gas tank center part (19).

13. Protective dome in accordance with the Claims 1 to 9, characterized in that the ring-shaped hood (11) can be locked with at least one of the fastening straps (14, 14a) to the liquefied petroleum gas tank.

14. Protective dome in accordance with the Claims 1 to 13, characterized in that the fastening straps (14, 14a) feature holes (21, 21a) to receive the snap connection devices (22, 22a).

15. Protective dome in accordance with Claims 1 to 14, characterized in that the cylindrical dome shaft (11) and the hood cover (12) are provided with a dirt- and water-repellant protective coating.

Fig. 1

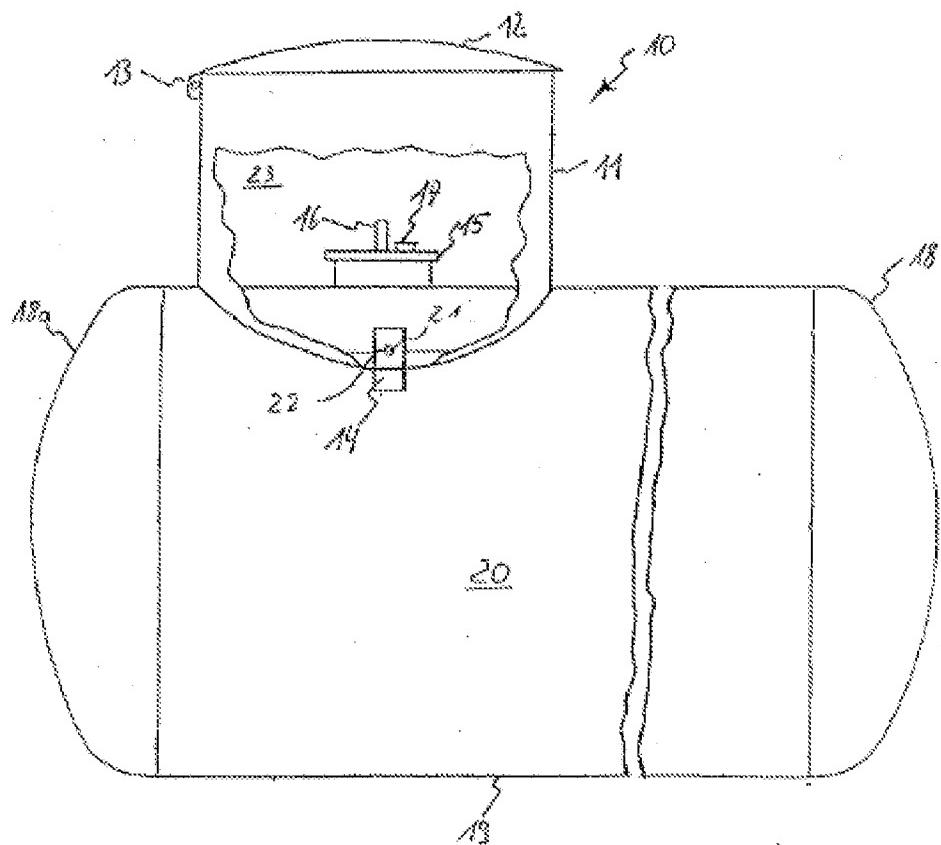


Fig. 2

